

- Planning Programming,
 Budgeting, Execution (PPBE)
- Funds Execution
- Introduction to Earned Value Management Systems





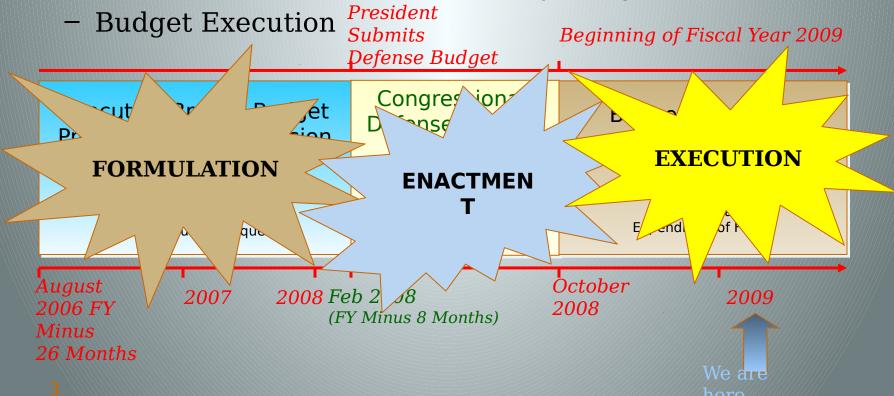
Key Topics

- The Defense Budget
- Future Years Defense Program (FYDP)
- Program Elements (PE)
- Program Element Monitor (PEM)
- Planning, Programming Budgeting and Execution (PPBE)



Three Phases:

- Formulation of President's Budget Request (PB)
- Review and Approval of the PB by Congress

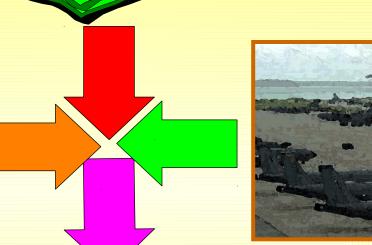


Future Years Defense Program

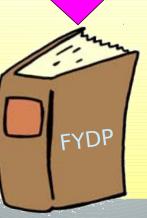








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Dollars



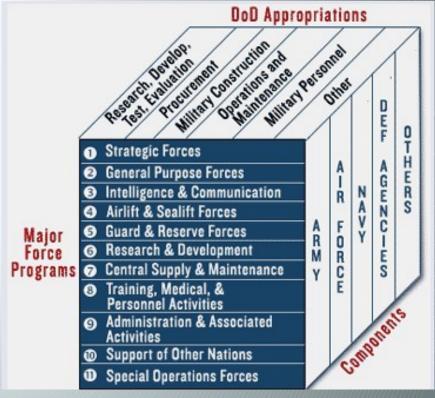
Equipment

FYDP: all resources in one document



Future Years Defense Program

- The Future Years Defense Program is:
 - A database product maintained by OSD and displaying the funded years of the defense program
 - Derived from the Service's databases
 - Updated by the PPBE process
 - Used at all levels
 - Two dipdiages (B) FYDP per year
 - "On-year": POM/BES, PB
 - "Off year": Fact of Life Changes/Change Proposals, PB



ACQ 101 Review, Lesson 9



FYDP Contains Budget Year(s) and Four Program Years



FY10 - FY15 FYDP

	FY11				
BY	BY2	+1	+2	+3	+4



 Because Congress passes an authorization and appropriation on just one year at a time, we must update the odd year budget (FY09 for example) before it is submitted. During that update, the FYDP will have 5 years; for an even year budget (FY08 or FY10) it has six



• The even years are called "On-Years" and the odd years are called "Off-Years"



- Program Elements are the primary data elements in OSD's FYDP
- They are the building blocks of the programming and budgeting system
- PEs can be tied to only one MFP
- PEs may contain one or more appropriations
- PEs can be attached to more than one program
- Every Program Element has a monitor (PEM)
 - Example: B-52 Squadrons (Active)
 - One PE (11113F)
 - Four approps (RDT&E, a/c procurement, mil pers, O&M)

Program Element Numbers Defense Acquisition University

- Program Element Numbers describe the program
- 0101113F is an actual PE
 - The first two digits identify the Major Force Program
 01 = Strategic Forces
 - The next two digits are special use by MFP
 01 = Offensive Forces
 - The next three digits identify the specific program,
 1 = Aircraft Units; 113 = B-52 Squadrons and its order assigned to a specific program e.g. B-52 is the 113th program assigned to 0101XXX
 - The last digit identifies the Service component. F = Air Force

MFP	Special Use	Specific Program	Service Component		
01	01	113	F		



- Each Program Element has one Program Element Monitor (PEM)
 - Subject matter expert on the contents of the PE
 - Responsible for documenting the PE
- A single PEM usually oversees all the PEs of the program, but every PE has one and only one PEM



The Resource Allocation Process

Defense Acquisition University 200 200 200 200 200 200 al Security Strate O /National Security Strategy National Military Strategy National Defense Strategy Chairman's Program Recommensation Rladoina (engenia) Quadrennial Defense Review Enuité Integrated Priority List COCOM Planning Process cano ICRRA Annual Planning & Programming Guidance AF Strategic Planning/CRRA (ongoing) Servenced Planning Process (ongoing trat Planning Guidance Loint Programming Guidance 441COM POM Developed & Delivered PPBE AF POM Beveloped Verview Submitted OSD Program & Budget Reviews President's Budget Submitted Engsment Congressional Review & Debate Budget Enacted **Budget Execution Planning** หลอบรับบัน O&M FinPlans Investment Burgas Record OSM Budget Review Budget Execution 200 20011 200 200 200 200 3

Planning, Programming, Budgeting and Execution **Defense Acquisition University**

- Provides a logical process for determining our needs and the resources required to meet those needs
- Primary DoD resource management system that:
 - Translates strategy into programs
 - Identifies force size, structure and equipment
 - Sets programming priorities
 - Allocates resources for operations, acquisition and other functions
- Evaluates actual output against planned per In the PPBE process, the Secretary of Defense establishes policies, strategy, and prioritized goals for DoD which are then used to guide resource allocation decisions that balance the guidance with fiscal constraints







1962 - 2003: PPBS

Secretary of Defense Robert McNamara institutes Planning, Programming, & Budgeting System

2003 - Present: PPBE

Secretary of Defense Donald Rumsfeld refines McNamara's system:

<u>Planning:</u> Assess threats and determine initial strategies

Determine mission needs and resources

<u>Programming:</u> Turn guidance into achievable, affordable packages Integrate fiscal, manpower & materiel requirements

<u>Budgeting</u>: Assess for efficient funds execution, scrub budget years and prepare defensible budget

Execution: Evaluating actual output against planned performance



- Objectives (from DODD 7045.14):
 - Defining the national military strategy necessary to help maintain national security and support U.S. foreign policy
 - Planning the integrated and balanced military forces necessary to accomplish that strategy
 - Ensuring the necessary framework (including priorities) to manage DoD resources effectively for successful mission accomplishment consistent with national resource limitations
 - Providing decision options to the Secretary of Defense to help him assess the role of national defense in the formulation of national security policy and related decisions



THE NATIONAL

Strategy



The National Military Strategy of the United States

of America

June 2008

The Strategy begins with the National Security Strategy (NSS) which deals with all elements of national power (economics, diplomacy, information, military)

> As the strategy cascades from the NSS, it becomes more specific and focuses more directly on the military aspects of the national strategy

> > But strategy stops short of being weapons system specific and does not result in guidance

Planning Phase Defense Acquisition University occumentation

- Guidance for the Development of the Force (GDF):
 - Resource informed articulation of national defense policies and military strategy
 - Used mainly by the Military Departments and Defense Agencies to align their internal priorities with DoD-wide performance goals for force development, management and corporate support
 - Considers a long-term (20-year) view of the security environment and helps shape the investment blueprint for nearer-term spending across the upcoming six-year
- Joiptogragramming Guidance (JPG):
 - A series of memos from the DEPSECDEF that captures decisions consistent with the GDF and QDR vision
 - Link between the Planning and Programming Phase
 - Provides guidance to the DoD Components for their development of their program proposal, or Program Objective Memorandum (POM)

Quadrennial Defense Defense Acquisition University Review (QDR)



"The 2006 QDR provides new direction for accelerating the transformation of the [DoD] to focus more on the needs of Combatant Commanders and to develop portfolios of joint capabilities rather than individual stove-piped programs."

- Congressionally mandated
- Conducted by SECDEF and CJCS
- Submitted to Congress with President's Budget during second year of each administration
- Comprehensive review of all elements of defense policy and strategy needed to support the national security strategy
- Foundation document for defense strategy and business policy

Programming Phase Defense Acquisition University

 Translates DoD guidance into action, balances allocation of resources to plans (requirements), organizes requirements into packages (programs), and prioritizes programs based on capabilities/risks

Programming Phase Defense Acquisition Defense

- Combined Program Objective Memorandum (POM) and Budget Estimate Submission (BES)
 - Submitted in "on-years"
 - Covers 6-year FYDP
 - A balanced set of programs that respond to the guidance and priorities of the Joint Programming Guidance within fiscal constraints
 - Provides a detailed and comprehensive description of the proposed programs, including time-phase allocation of resources (forces, funding, and manpower) by program



- Important document prepared in support of acquisition programs
- Standard forms used to justify budget in POM/BES during the PBD
- This is often the primary information source the decision-makers see on your program = IMPORTANT!
- Example:
 - RDT&E exhibits:
 - R-1 RDT&E Programs List
 - Summary level "bottom line" by Program Element
 - R-2 RDT&E Budget Item Justification Sheet
 - Identifies each project's funding
 - R-3 RDT&E PE/Project Cost Breakdown
 - Identifies individual project tasks and their budget
 - Procurement:
 - P-1 Procurement Program List
 - Summary listing of procurement requirements by line item
 - P-40 Procurement Budget Item Justification Sheet
 - Funding profile



RDT&E Exhibit R-2

Budget Item Justification

UNCLASSIFIED

PE NUMBER: 0604233F

(JPATS)

(AUP)

4102

4376

PE TITLE: Specialized Undergraduate Pilot Training

Exhibit R-2, RDT&E Budget Item Justification							February	2008		
					PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training					
	Cost (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost to	Tota1
Cost (\$ II	Cost (\$ iii iviilioiis)	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
	Total Program Element (PE) Cost	4.112	14.927	7.462	3.977	5.105	3.665	5.338	Continuing	TBD
4102	Joint Primary Aircraft Training System	2 496	1 616	2 207	2 245	2 002	2 427	4.075	Continuing	TDD

3.892

1.213

2.427

1.238

2.345

1.632

DATE

4.075

1.263

Continuing

Continuing

TBD

TBD

(U) A. Mission Description and Budget Item Justification

T-38 Avionics Upgrade Program

Supports Air Education and Training Command's (AETC) implementation of Specialized Undergraduate Pilot Training (SUPT) and the Department of Defense initiative for joint pilot training. The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34 respectively) and associated Ground Based Training Systems (GBTS). The Air Force is the Executive Service. For FY2006, FY2011 and FY2013, Project 4102, JPATS, includes funding for upgrades to the Simulator for Electronic Combat Training (SECT), a one-of-a-kind simulator at Randolph AFB TX used to train electronic warfare officers. The T-38 AUP is an integrated modernization of the T-38A and AT-38B cockpits to support mission ready fighter and bomber training. Additionally, there are funds in this project for Phase I testing of propulsion enhancements for the T-38 aircraft and to update T-38 flight performance models, Technical Orders, and AUP software for both aircraft and Aircrew Training Devices for changes brought about by the T-38 Propulsion Modernization Program (PMP).

2.287

5.175

4.646

10.281

2.486

1.626

T-38 FY2007 - FY2013 funding is for software block updates driven by FAA-mandated changes, National Aerospace System (NAS) requirements, and enhancements identified during test and evaluation. FY2008 and FY2009 includes development funding for improved T-38 brakes.

JPATS T-6 FY2007 - FY2013 includes annual funding for the development and test of upgrades and enhancements to both the aircraft and the Ground Based Training System (GBTS) hardware and software components.

This program element is in Budget Activity 5, System Development and Demonstration (SDD) because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

Documentation Defense Acquisition University (cont)

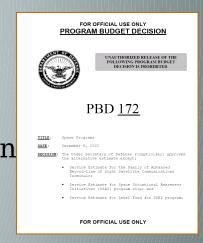
- Program Decision Memorandum (PDM)
 - Address macro-level issues, adjusting associated program content across the FYDP to align with OSD priorities
 - Usually issued as drafts first
 - SECDEF's final decision on service
 POM/BES request (or Change Proposals)
 - Summarizes the program decisions of the current cycle

Budgeting Phase Defense Acquisition University

- Budgeting phase occurs concurrently with the programming phase
- DoD Components develop a detailed budget estimate for budget years of the programs approved during the programming phase
- The budget converts the programmatic view into the format of the Congressional appropriation structure, along with associated budget justification documents
- Budget estimate is reviewed by Under Secretary of Defense (Comptroller) and the Office of Management and Budget (OMB)
 - They ensure that programs are funded in accordance with current financial policies, and are properly priced
 - The review also ensures that the budget documentation is adequate to justify the programs presented to Congress

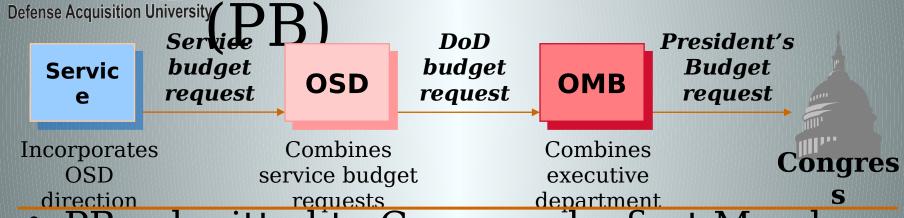
Budgeting Defense Acquisition University Documentation

- Program Budget Decisions (PBD)
 - Drafted by DOD comptroller as result of hearings
 - Series of documents providing OSD direction to change or adjust the POM/BES



- President's Budget (PB)
 - Contains the revised budgets that support the decisions resulting from the concuprogram and budget review process (s PBDs and PDMs)
 - Reflects results of POM/BES
 - 2 Year budget

The President's Budget



- PB submitted to Congress by first Monday in February
 - Requests DoD funds by appropriation and line item
 - "R-1 lines" for RDT&E, "P-1 lines" for procurement, etc
- Substantial documentation follows request
 - 25 J-books: Justification documents for various accounts, such as RDT&E (R-



Occurs simultaneously with the program and budget reviews

 Provides feedback to the senior leadership concerning the effectiveness of current and prior resource allocations

• Metrics are being developed to support the execution review that will measure actual output were us planned



Questions?



Sunds Execution

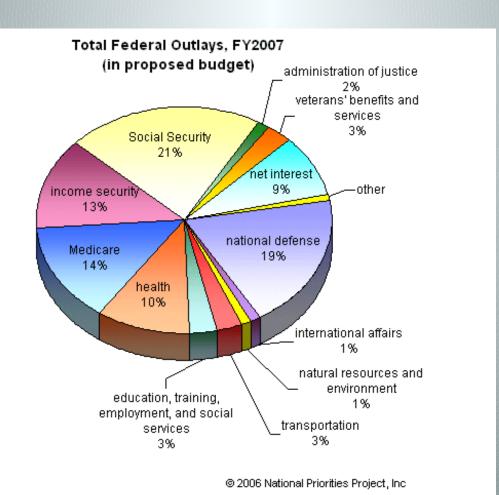


- Introduction to the Federal Budget
- The Budgetary Process



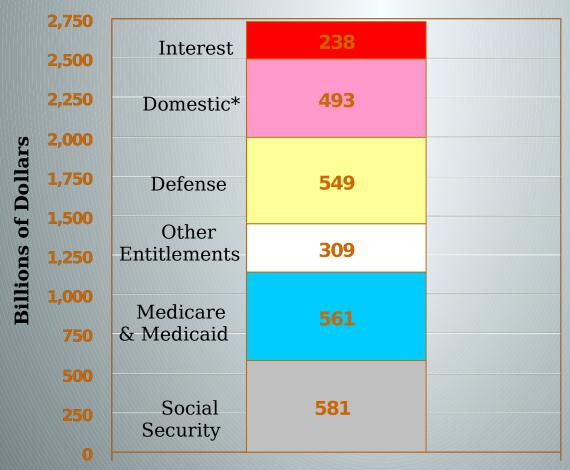


Defense Acquisition University Competition



Other includes general science, space, and technology; energy; agriculture; commerce and housing credit; community and regional development; general government; allowances; and undistributed offset receipts.

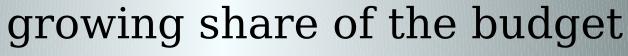
Composition of Actual FY 2007 Federal Government Outlays

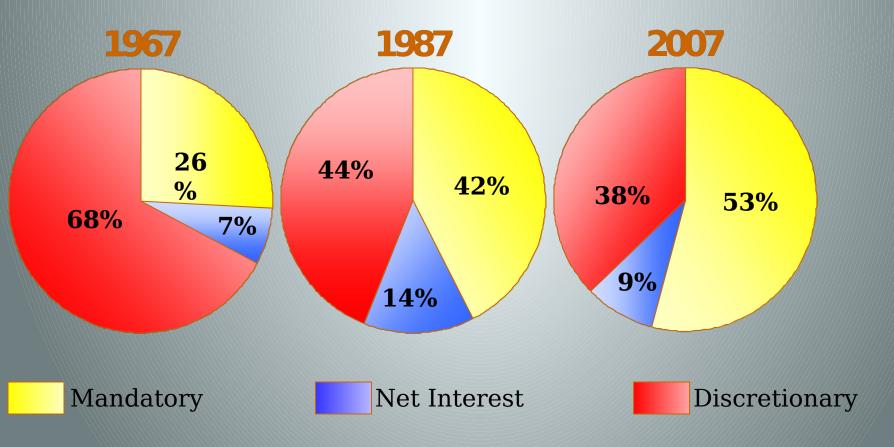


Outlays: \$2.73 trillion

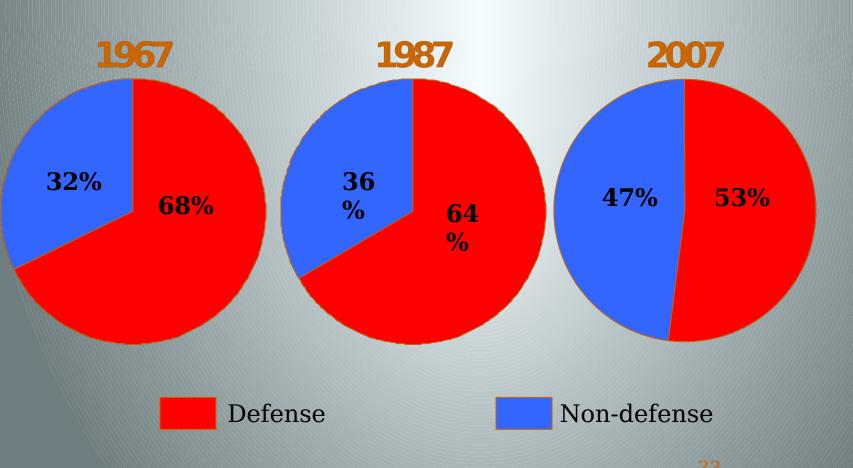
*Includes all appropriated domestic spending such as education, transportation, homeland security, housing assistance, and foreign aid. Source: CBO 2008.

Mandatory spending is consuming Defense Acquisition University a Acquisition University a

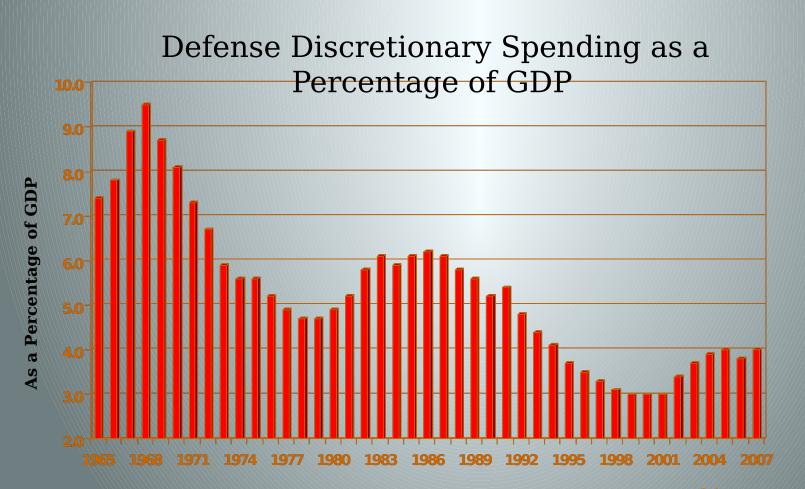




Change in Composition of Defense Acquisition University Discretionary Spending



Defense Acquisition Universals Defense A Priority?



Source: CBO January

2008

ottom Line

- Defense is competing with other priorities
- Your program is competing with other defense priorities

BUILD A SECOND PROTOTYPE AND...

You MUST understand the budgetary

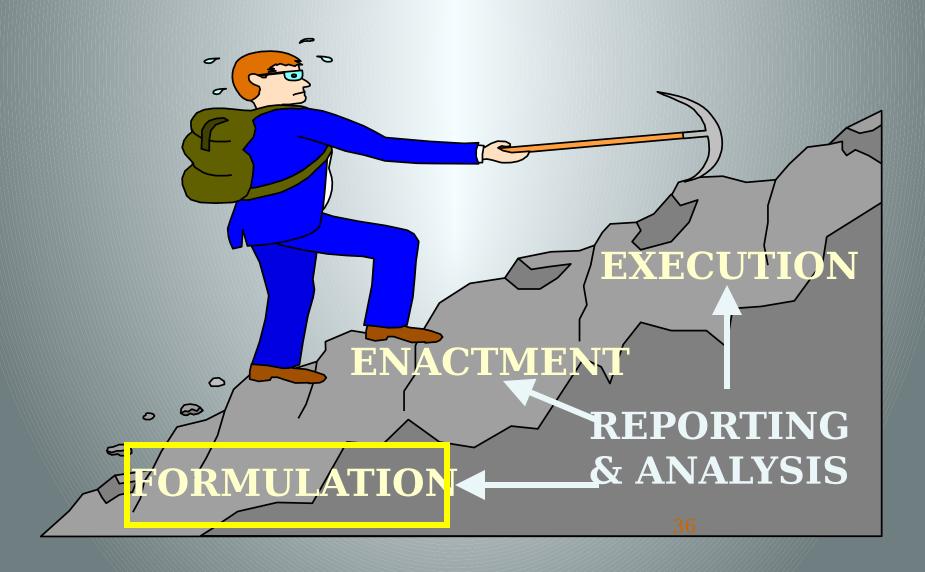
process to be able to successfully

fight for s





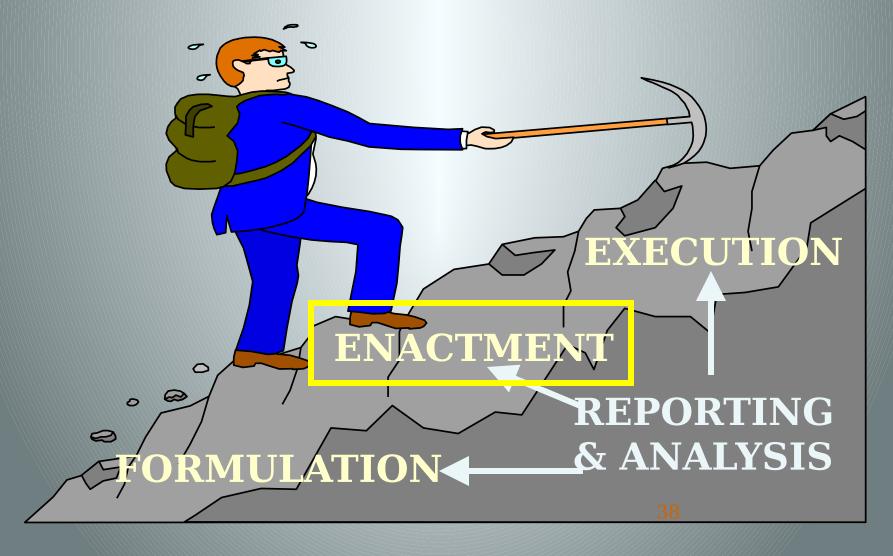
Defense Budgetary Process





- Provide a logical process for determining our needs and the resources required to meet those needs
 - PLANNING
 - Assess threats and determine initial strategies
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 - PROGRAMMING
 - Turn guidance into achievable, affordable packages
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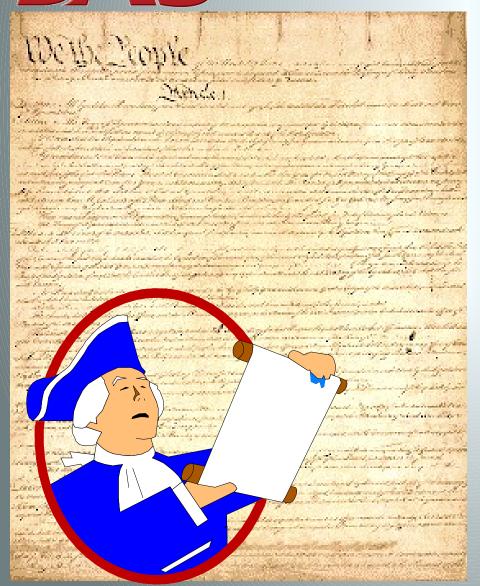
Defense Ac British getary Process





- How a Bill Becomes Law
- Concurrent Budget Resolutions
- Authorizations Act
- Appropriations Act
- Continuing Resolution Authority
- Reprogramming
- Legal Restrictions

Role of Congress



"No money shall be drawn from the treasury, but in consequence of appropriations made by law; and a regular statement and account of receipts and expenditures of all public money shall be published from time to time."

> --U.S. Constitution, Article 49 Section 9

De How Bill Becomes Law

- 1. A Bill Is Introduced
- 2. Hearings Are Held
- 3. The Bill Is Marked Up
- 4. Committee Reports
 The Bill
- 5. Floor Debate
- 6. Conference Committee
- 7. Conference Report
- 8. Final Floor Action
- 9. Signed into Law / Veto



Congressional Budget imeline Defense Acquisition University **FEB OCT MAR APR** JUL **AUG SEP MAY** JUN President's House CompletionTarget Fiscal Year CBO ReportTarget CBR Completion
After 15 May, Approps May Markup for Appropriations Bills Budget **Beains** HBC Markup Floor Hearing oncurrent **Floor** udget **CONF** SBC Resolution **Floor** Hearing Floor Markup Marku Floor House Floor **HASC Hearings** CONF Public uthorization **SASC Hearings** Senate Marku Floor Floor Floo Floo Marku House **HAC Hearings** CONF ppropriation Public Floo Senate **SAC** Hearings Floo Marku



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Concurrent Budget

Baselution

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Concurrent Budget Defense Acquisition University Resolution

- Framework for entire Federal Budget
- Revenue targets
- Ceilings on budget authority and outlays for the two types of spending:
 - Discretionary and Mandatory
- Formal decisions on program funding levels are not made at this time

Defense Acquisition Laire Litta Ctment

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Defense Acquisition Ur	iversity JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
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Senate		SASC	Hearin	gs	Marl p	cu F	loor	F	loor	
							4			

Defense Acquire horization

- Approves Program
 - Provides statutory authority to establish or maintain a government program or agency
 - Defines the scope and content of programs
- Sets Funding Ceilings
 - Authorizes program appropriation level
 - Statutory prerequisite for the

Defense Acquisiting a Ctment

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Appropriations

Defense Acquisition Ur	jan	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Pr	esident's Budget	<mark>∕/</mark> CBO Report [∏]	arget CBR Com	pletion After 15	 May, Approps	\lambda \lambda May Markup \f	louse Completi or Appropriation	onTarget ons Bills		Fiscal Year Begins
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Defense Acquisition Defens

- Funds to Operate
 - Allows DoD to obligate funds for defense programs
- Proceeds in tandem with CBR and Authorization
- 12 Appropriation Acts

Defense Acquisition Appropriations Acts

- Agriculture, Rural Development, Food and Drug Administration, and Related Agencies
- Defense (National Security)
- Commerce, Justice, State, and the Related Agencies
- Energy and Water Development
- State, Foreign Operations, and Related Programs
- Interior, Environment, and Related Agencies
- Homeland Security
- Legislative Branch
- Military Construction, Veterans Affairs, and Related Agencies
- Transportation, Housing and Urban Development, and Related Agencies
- Financial Services and General Government
- Labor, Health and Human Services, Education, and Related Agencies

Provide Funding for DOD

Major Appropriation Defense Acquisition UniverAccounts

- PROCUREMENT 3 Years
 - -3010 Aircraft
 - -3011 Munitions
 - -3020 Missile
 - -3080 Other
- MILCON -3300 5 Years
- O&M 3400 1 Year
- MILPER 3500 1 Year
- RDT&E 3600 2 Years

Appropriations Funding Defense Acquisition University Propriation Services (Service) Propria

Annual

- Made for a particular year and is only available during that year
- MILPERS (3500) & O&M (3400)

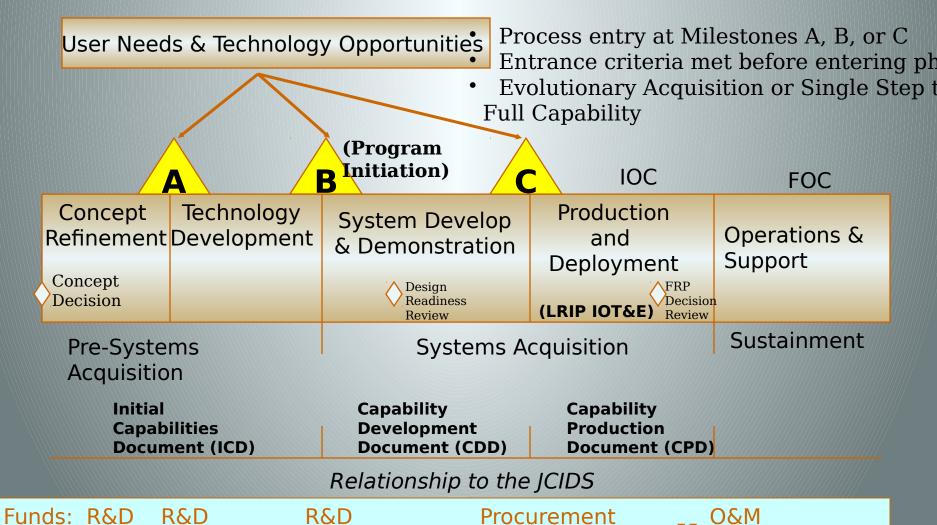
• Full

- Must yield a useable end item—no piecemeal buys
- Deliveries of approved quantity of procurement items to be completed within a 12 month period
- Procurement (30XX) & MILCON(3300)

Incremental

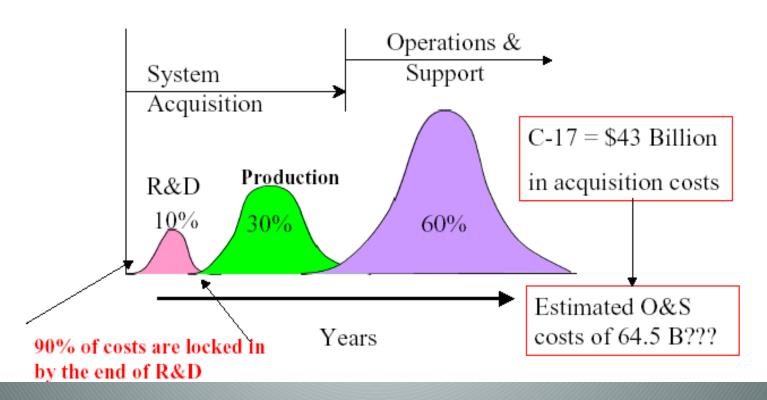
- Made for a particular year and is available

Defense Acquisition in the street of the str



Defense AAisitalisition Resources

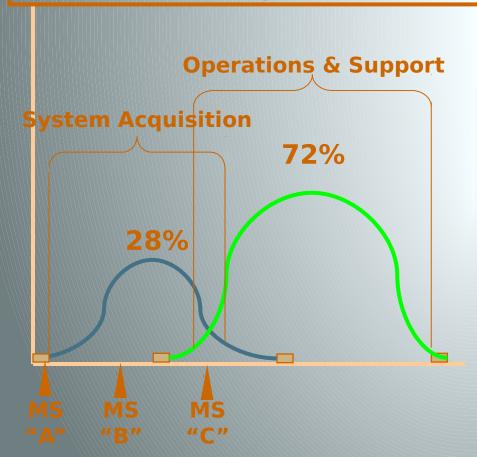
Operations & Support Costs - 60% of system cost

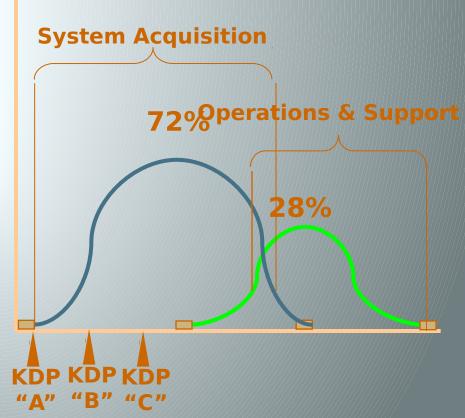




Life Cycle **Comparison**

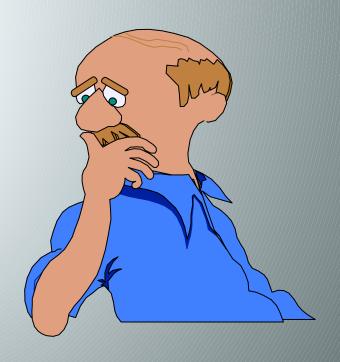
Typical DoD Life Cycle Cost Curve Typical Space Life Cycle Cost Curve







SO ...WHAT
HAPPENS IF
A BUDGET IS NOT
PASSED BY 1
OCT????





- How a Bill Becomes Law
- Concurrent Budget Resolutions
- Authorizations Act
- Appropriations Act
- Continuing Resolution
 Authority
- Reprogramming
- Legal Restrictions

Continuing Resolution Defense Acquisition University Authority (CRA)

- Allows government to operate for limited time with limited funds
- Rules
 - 1. Applies to ALL appropriation Accounts
 - 2. Services request funds (short term)
 - 3. New Programs <u>CANNOT</u> start work (nor can new contracts begin)
 - 4. Funding limited to last year's levels or this year's congressional committee levels

Defense Acquisition Inlye in a Ctment

- How a Bill Becomes Law
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Authority

- Reprogramming
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REPROGRAMMING Defense Acquisition Princers by PROGRAMMING

- Use of funds for purposes other than those planned at the time of the appropriation
- Legally moving money WITHIN an appropriation account
- Must have approval
- Must NOT exceed

Defense Acquisition United that the Company of the

- How a Bill Becomes Law
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Legal Limitations of Appropriations

COLOR EAR MOUNT



C = Color of Money

- <u>Misappropriations Act</u> = Purpose
 - Spent on EXACTLY what Congress approved
 - Cannot spend Procurement funds to do R&D



Y = Year

- Bona Fide Need Rule = time
 - Need must be for fiscal year in which funds are appropriated
 - New Contracts
 - The year of funds used will be the fiscal year in which the work was planned to be performed
 - Exception: Authorized DoD agencies can obligate funds at the time of contract award to finance any severable service contract with a period of performance of up to one year. (FY98 Defense Authorization Act)
 - Contract Modifications
 - Use the FY funds that were used to fund the original product/service



A = Amount

- Anti-Deficiency Act = Amount
 - Cannot obligate more than what Congress has appropriated
 - Cannot authorize or create obligations before funds become available

Defense Acquis Dutie Lary Process



Budgeting is so much Defense Acquisition United by Defense Acquis

When faced with a 25-year threat,

- The government responds with a 15year plan,
- In a 5- or 6-year defense program,
- Managed by 3- or 4-year personnel (who change jobs at least once during their tour),
- Attempting to develop a 2-year budget,
- Which in reality is funded by a 1-year approp,
- Which is typically 4-6 months late,
- And is actually formulated over a 3-day

Apportionment Defense Acquisition University Process

SERVICES

COMMAND

PRODUCT CENTER

> PROGRA M OFFICE



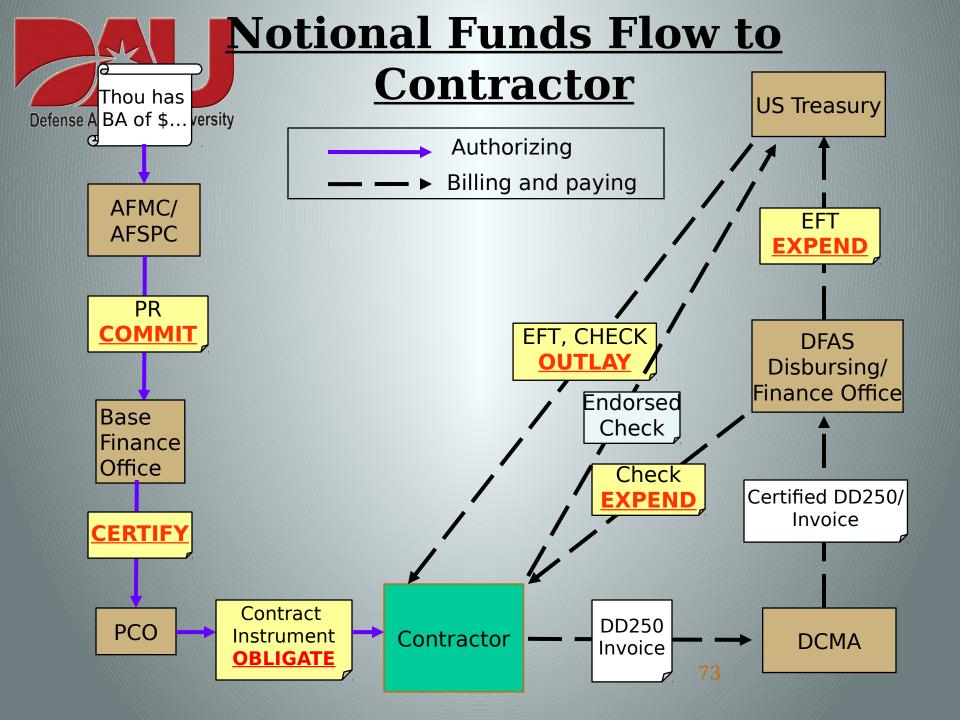
BUDGET
AUTHORITY -Your
authorization to

Defense Acquility Cution Phase

- Commitment = ADMINISTRATIVE
 - "I set aside \$200 for a bike"
- Certification = FM function
 - "Okay, looks like you do have the \$200 in your bank account and it can be used for a bike"
- Obligation = LEGAL
 - "I bought a bike with my credit card"

Defense Acquisition Phase

- Expenditure = Check or EFT (DFAS)
 - "I wrote a check to my credit card company"
- Outlay = Vendor cashes check
 - "My credit card company cashes my check"





DFAS (Defense Defense Acquisition University Finance and Accounting System)

- Receives requests for payment from Contractor
- Provides O&E data to headquarters
- Official O&E program data
 - DFAS data lags actual events
 - DFAS sometimes makes mistakes
- PEMs monitor their DFAS data carefully

Expired Appropriation Defense Acquisition University

Active = still available for obligation

 Expired = Available for expenditure or adjustment but not obligation

Remain in an expired status for 5 years AFTER obligation period

 Canceled (closed) = no longe available for expenditure or adjustment

Payments for these obligations must be made from the program's



<u>Active</u>			Expired		<u>Canceled</u>
MILPER	1	2	-6	6	
O&M	1	2	-6	6	
RDT&E	2	3	-7	7	
Procureme	nt	3	4-8	3	8
MILCON	5	6	-10		10

RDT&E Example:

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
FY09\$	ACT	ACT	EXP	EXP	EXP	EXP	EXP	CAN	CAN
FY10\$		ACT	ACT	EXP	EXP	EXP	EXP	EXP	CAN
FY11\$			ACT	ACT	EXP	EXP	EXP	EXP	EXP

Defense Acaban Process



Defense Acquisition Recoporting and Analysis

- Done throughout entire PPBE process
- Annual Forecast = Spend Plan
 - Project Obligations and Expenditures for each appropriation account (3400, 3600, etc)
 - Continually track from that forecast
 - Program execution is judged by O&E data
 - If programs don't spend all their money.



OSD O&E Goals

		RDT&E		Procurement		O&M		MILCON	
	Month	Obl.	Exp.	Obl.	Exp.	Obl.	Exp.	Obl.	Exp.
	Oct	7.5%	4.6%	6.7%	N/A	8.3%	6.3%	5.4%	1.2%
	Nov	15.0%	9.2%	13.3%	N/A	16.7%	12.5%	10.8%	2.3%
	Dec	22.5%	13.8%	20.0%	N/A	25.0%	18.8%	16.3%	3.5%
E	J an	30.0%	18.3%	26.7%	N/A	33.3%	25.0%	21.7%	4.7%
	Feb	37.5%	22.9%	33.3%	N/A	41.7%	31.3%	27.1%	5.8%
Mal	Mar	45.0%	27.5%	40.0%	N/A	50.0%	37.5%	32.5%	7.0%
E	Apr	52.5%	32.1%	46.7%	N/A	58.3%	43.8%	37.9%	8.2%
8	May	60.0%	36.7%	53.3%	N/A	66.7%	50.0%	43.3%	9.3%
Ę	J un	67.5%	41.3%	60.0%	N/A	75.0%	56.3%	48.8%	10.5%
E	J ul	75.0%	45.8%	66.7%	N/A	83.3%	62.5%	54.2%	11.7%
	Aug	82.5%	50.4%	73.3%	N/A	91.7%	68.8%	59.6%	12.8%
	Sep	90.0%	55.0%	80.0%	N/A	100.0%	75.0%	65.0%	14.0%
	Oct	90.8%	57.9%	80.8%	N/A	100.0%	77.1%	67.1%	18.1%
	Nov	91.7%	60.8%	81.7%	N/A	100.0%	79.2%	69.2%	22.2%
	Dec	92.5%	63.8%	82.5%	N/A	100.0%	81.3%	71.3%	26.3%
E.	J an	93.3%	66.7%	83.3%	N/A	100.0%	83.3%	73.3%	30.3%
all	Feb	94.2%	69.6%	84.2%	N/A	100.0%	85.4%	75.4%	34.4%
E	Mar	95.0%	72.5%	85.0%	N/A	100.0%	87.5%	77.5%	38.5%
2	Apr	95.8%	75.4%	85.8%	N/A	100.0%	89.6%	79.6%	42.6%
B	May	96.7%	78.3%	86.7%	N/A	100.0%	91.7%	81.7%	46.7%
E	J un	97.5%	81.3%	87.5%	N/A	100.0%	93.8%	83.8%	50.8%
B	J ul	98.3%	84.2%	88.3%	N/A	100.0%	95.8%	85.8%	54.8%
P	Aug	99.2%	87.1%	89.2%	N/A	100.0%	97.9%	87.9%	58.9%
	Sep	100.0%	90.0%	90.0%	N/A	100.0%	100.0%	90.0%	63.0%
	Oct	100.0%	90.8%	90.8%	N/A	100.0%	100.0%	90.4%	65.5%
	Nov	100.0%	91.7%	91.7%	N/A	100.0%	100.0%	90.8%	68.1%
	Dec	100.0%	92.5%	92.5%	N/A	100.0%	100.0%	91.3%	70.6%
	J an	100.0%	93.3%	93.3%	N/A	100.0%	100.0%	91.7%	73.2%
Ē	Feb	100.0%	94.2%	94.2%	N/A	100.0%	100.0%	92.1%	75.7%
F V	Mar	100.0%	95.0%	95.0%	N/A	100.0%	100.0%	92.5%	78.3%
F	Apr	100.0%	95.8%	95.8%	N/A	100.0%	100.0%	92.9%	80.8%
8	May	100.0%	96.7%	96.7%	N/A	100.0%	100.0%	93.3%	83.3%
B	J un	100.0%	97.5%	97.5%	N/A	100.0%	100.0%	93.8%	85.9%
	Jul	100.0%	98.3%	98.3%	N/A	100.0%	100.0%	94.2%	88.4%
	Aug	100.0%	99.2%	99.2%	N/A	100.0%	100.0%	94.6%	91.0%
	Sep	100.0%	100.0%	100.0%	N/A	100.0%	100.0%	95.0%	93.5%



OSD O&E General Guidelines

- Exceeding these goals is recommended to protect funds
- If DFAS errors exist, be prepared to defend adjusted rates with proof of unrecorded obligations, expenditures, etc...
- Avoid all initial 4th quarter obligations
 - OSD feels if we can wait until the last



Defense Acquisaion Questions?



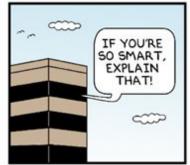
















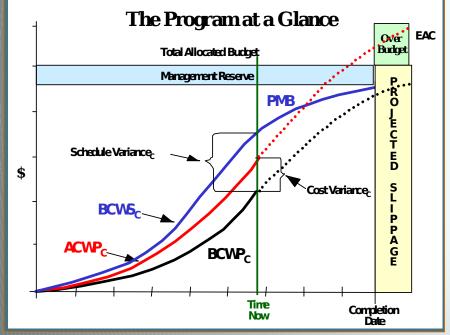
Intro to Earned Value Management Systems

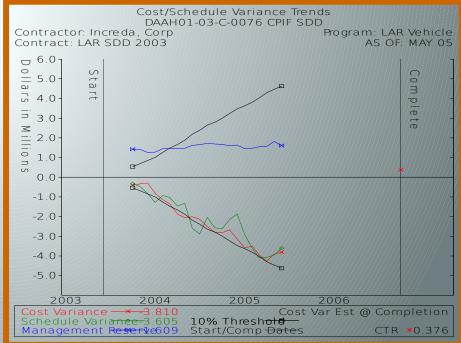


- Define the basic elements of performance measurement
 - Identify the governing EVM statutes, regulatory policy, and DoD implementation guidance.
 - Describe how earned value management combines work scope, schedule, and resources.
 - Explain in plain language the meaning of the five earned value variables: BCWS; BCWP; ACWP; BAC; and EAC.
 - Explain in plain language the meaning of the SV,
 CV and VAC earned value metrics
 - Recognize earned value variables, SV, and CV on
 EV graphs and Format 1 of the Contract



Powerful Qualitative Reports







DoDI 5000.02 EVM

Policy Guidance

DoDI 5000.02, December 8, 2

Table 5. EVM Implementation Policy.

REQUIREMENTS	SOURCE	WHEN REQUIRED
Cost/Incentive Contracts ³ ≥ \$50 liou ² Compliance with EVM system lelines in ANSL/EIA-748 ³	Part 7 of Reference (c) This Instruction	At contract award and throughout contract performance
EVM system formally validated and spted by cognizant contracting cer		At contract award and throughout contract performance
Contract Performance Report MGMT-81466A)		Monthly
integrated Master Schedule MGMT-81650)		Monthly
integrated Baseline Reviews		Within 180 days after contract award, exercise of options, and major modifications
Cost/Incentive Contracts ¹ ≥ \$20 lion ² but < \$50 Million ²	Part 7 of Reference (c) This Instruction	
Compliance with EVM system lelines in ANSI/EIA-748 ³ (no nal EVM system validation)		At contract award and throughout contract performance
Contract Performance Report (DI- MT-81466A) (tailoring mmended)		Monthly
integrated Master Schedule MGMT-81650) (tailoring mmended)		Monthly
integrated Baseline Reviews		Within 180 days after contract award, exercise of options, and major modifications
Cost/Incentive Contracts ¹ < \$20 lion ²	Part 7 of Reference (c) This Instruction	At the discretion of the PM based on cost-benefit analysis
Firm Fixed-Price Contracts ¹ ardless of dollar value	Part 7 of Reference (c) This Instruction	Limited Use-must be approved by the MDA based on a business case analys

The term, "Contracts," includes contracts, subcontracts, intra-government work agreements, and other agreements. tentive" contracts include fixed-price incentive.

Application thresholds are in then-year dollars.

ANSI/EIA-748 = American National Standards Institute/Electronic Industries Alliance Standard 748, Earned Value

- Compliance with 32 EVMS Guidelines
- Formal EVM system validation
- Contract Performance Report
- Integrated Master Schedule
- Integrated Baseline Reviews

Congains syveilone but < \$50M

- Compliance with 32 EVMS Guidelines
- No Formal EVM system validation
- Contract Performance Report (tailored)
- Integrated Master Schedule

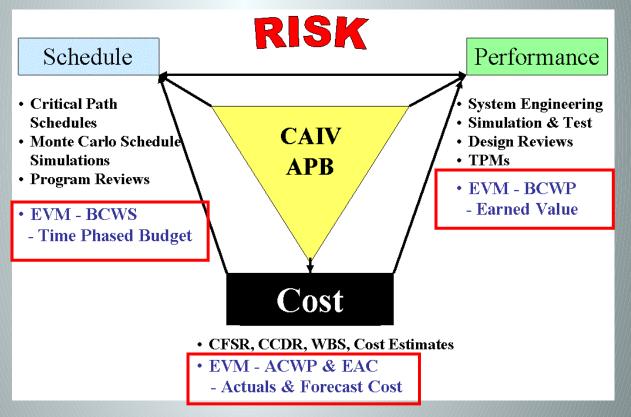
Cotailared) * < \$20M

- : Ettepsated Baseline Reviews
- ខុត្តខ្លាំភូទ្យាsurveillance
- · Cast hanofit analysis required
- * Contracts -- Cost/Incentive contracts, subcontracts, inter-government work agreements

EVM Discouraged on FFP; EVMIG also when nature of work is LOE or Time &

Integrated Program Management

Defense Acquisition University



Acquisition program baselines (APB) have three elements: Performance; Schedule; and Cost. A primary job of program management is to manage risk and there are many tools available to accomplish this. Earned value (EV) management addresses each of the APB elements. The EV budgeted cost of work scheduled (BCWS) addresses scheduling, the EV budget cost of work performed (BCWP) measures performance, and the EV actual cost of work performed (ACWP) and estimate at completion (EAC) measure cost.

Another element of today's DoD acquisition programs is cost as an independent variable (CAIV). CAIV requires that total ownership costs be treated as a military requirement. The earned value management uniquely addresses all APB elements by providing a common denominator of



Statutes Related to EVM





Law

- Government
 Performance and Results

 Act of 1993 GPRA
- Federal AcquisitionStreamlining Act of 1994Title V (FASA V)
- Information Technology
 Management Reform Act
 of 1996 (ITMRA /
 Clinger-Cohen

Purpose

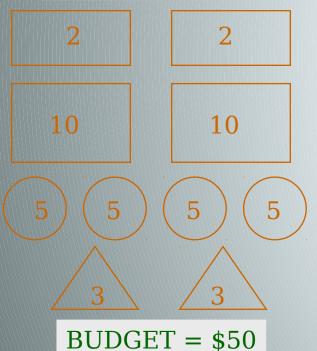
- Establish performance Standards for Federal budget
- Report cost, schedule and performance goals and evaluate progress
- Report performance information systems acquisition

The requirement for EVM as it is practiced today can be traced to three public laws

*

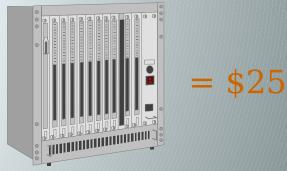
Traditional Measurement





ACTUAL COST





$$COST = $40$$

STATUS: Variance = Budget - Actual = + \$10

Favorable

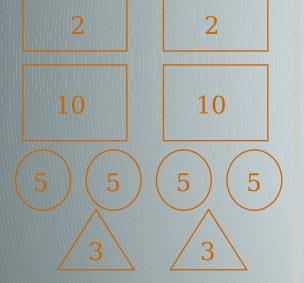
In traditional financial management we often compare budget estimates with actual costs to make program management decisions. The geometric shapes on the PLANNED side of this slide represent a monthly budget plan of fifty dollars. The people and computer on the ACTUAL COST side represent the monthly costs of forty dollars. Because this model does not account for work accomplishment, just comparing the budget of fifty dollars with actual

costs of forty incorrectly suggests a ten dollar favorable variance

*

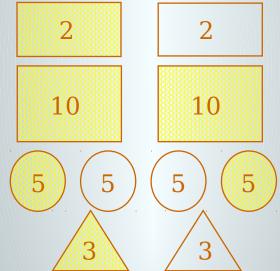
Earned Value Measurement

Defen: PLANNED



BUDGET = \$50

PERFORMED



EARNED VALUE = \$35

ACTUAL COST





COST = \$40

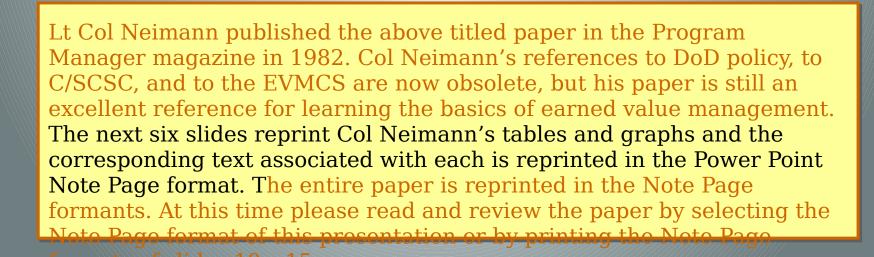
STATUS: Schedule Variance = Earned - Budget = - 15 Unfavorable

Cost Variance = Earned - Actual = -5
In earned value management, we add the additional variable of work performed. The shaded geometric shapes in the PERFORMED section represent the monthly EARNED VALUE of thirty-five dollars. Comparing this with the monthly fifty dollar BUDGET, we now correctly see that fifteen dollars worth of work was not completed. Comparing the EARNED VALUE with the ACTUAL COST we can see the completed



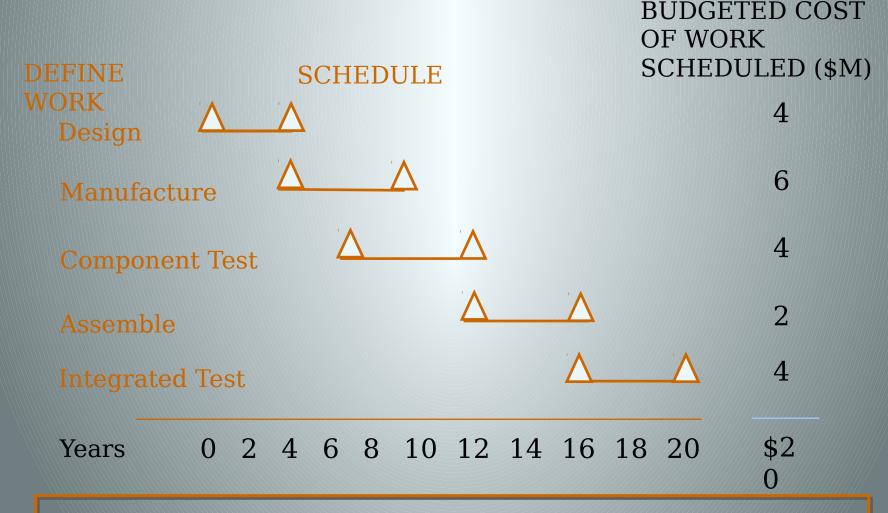
If the pharaoh had only used an earned value system in building the pyramids

By Lt Col William J Neimann, USAF (Ret)





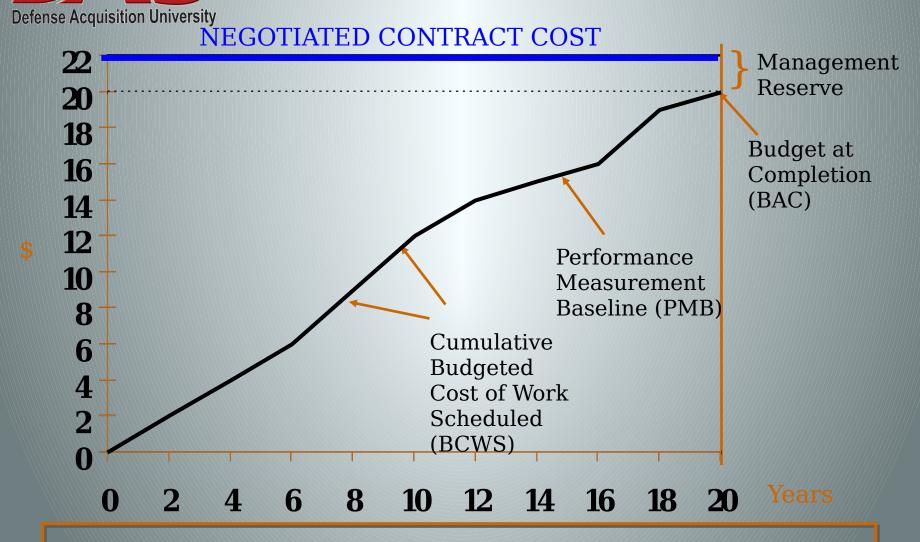
gure 1 - The Program Plan



See or Print Notes Page format to read section one of:

If the Pharaoh Only Used Earned Value System in Building the

Figure 2 - The Time-Phased Spend Plan

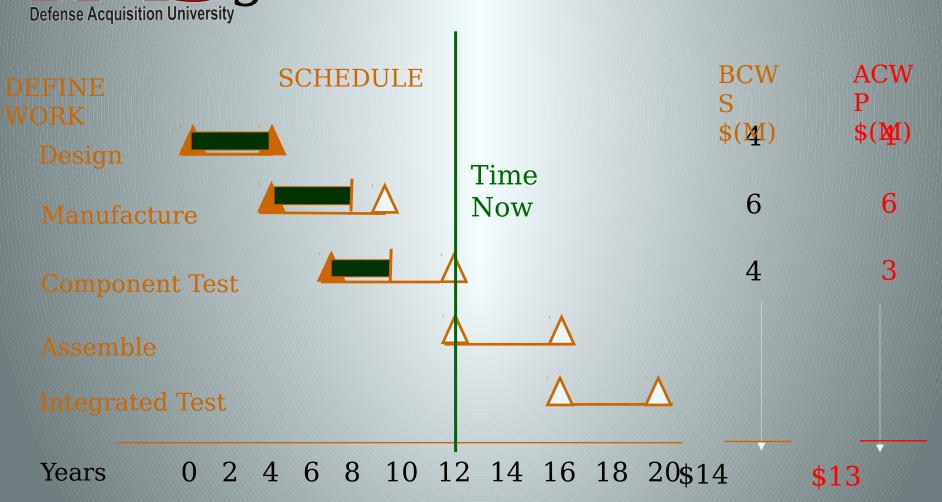


See or Print Notes Page format to read section two of:

If the Pharaoh Only Used Earned Value System in Building the

Dimaraida

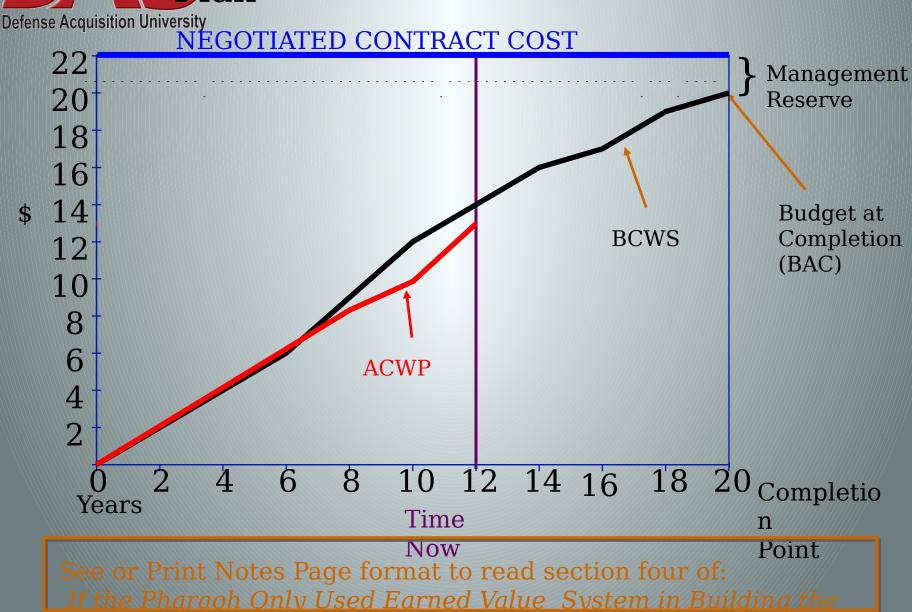
Figure 3. Current Status



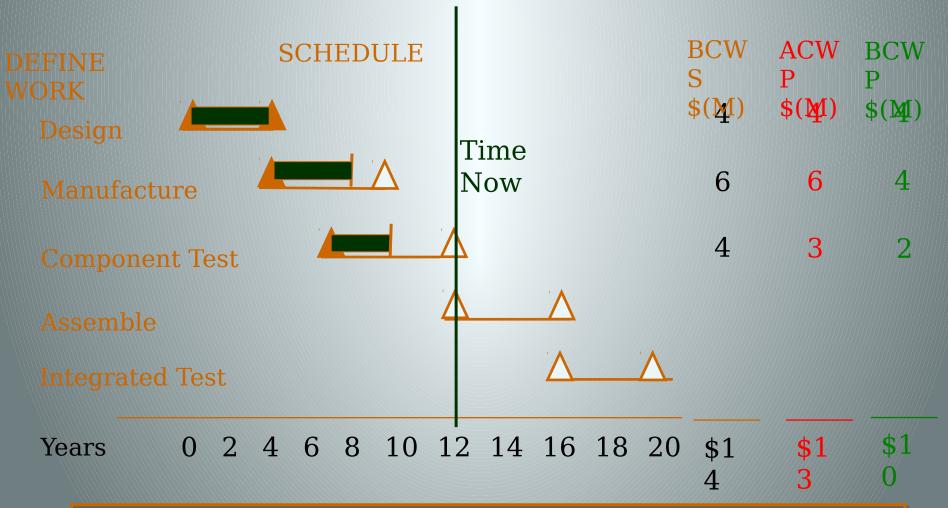
See or Print Notes Page format to read section three of:

If the Pharaoh Only Used Earned Value System in Building the

Figure 4. Cost Status Imposed on the Plan



Defense Acquisition University Type Status Type Status

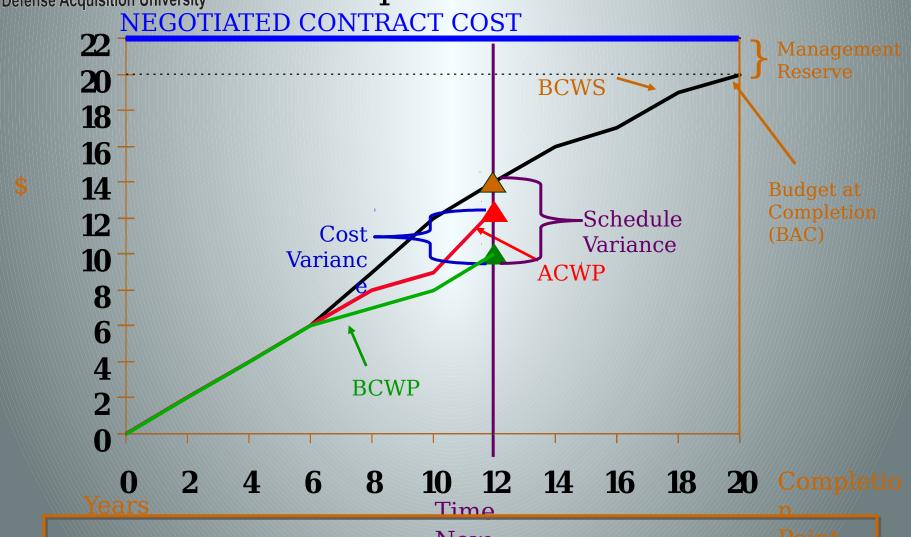


See or Print Notes Page format to read page section five of:

If the Pharaoh Only Used Earned Value System in Building the



Figure 6. Current Status Imposed on the Spend Plan



See or Print Notes Page format Volvead page section six of: Point If the Pharaoh Only Used Earned Value System in Building the



Earned Value Independent Variables

Description

Meaning

BCWS

Budgeted Cost of Work Scheduled is the dollarized value of all work scheduled to be accomplished in a given period of time. BCWS is the planning function required by earned value and establishes the baseline against which performance is measured.

Planning Baseline -- PMB

BCWP

Budget Cost of Work Performed is the dollarized value of all work actually accomplished in a given period of time. The variable is also called earned value and symbolizes the completion of work. BCWP is not realized until the work is completed.

Work Accomplishment Earned Value

ACWP

Actual Cost of Work Performed is the costs incurred and recorded for performance measurement purposes within a given period of time. ACWP is independently reported by the contractor's accounting system. Simply stated: "actuals" are "actuals".

Expenditures "Actuals are Actuals"

BAC

Budget at completions are established early in the contract for every given level of the work break down structure. They capture the budgets for all authorized work and they are the benchmarks for forecasting overruns and underruns.

Authorized Work

EAC

Estimate at completions are an independent forecast of the final costs required to complete any given level of the work break down structure. These are normally reported by the contractor. The contractor's EAC is also called the LRE or latest revised estimate.

Forecast Cost

Earned Value Has Five Independent

Variables



Earned Value Metrics

Defense Acquisition University Metric	Description	Meaning
SV = BCWP - BCWS	Schedule Variance (SV) indicates some amount of work was not completed as originally planned. A positive SV indicates work was complete ahead of the original plan. A negative SV indicates work was not completed on time as original scheduled. Since BCWS and BCWP will always be equal at the end of the contract, the SV is always zero at the end of the contract. For this reason, many believe a better name for this metric would be accomplishment variance—how much work did we plan to	Accomplishment Variance
CV = BCWP - ACWP	accomplish (BCWS), verses how much work did we Gost Marian (BCWS), indicates the actual cost to complete some amount of work was different than originally budgeted. A positive CV indicates the work was done for less than budgeted. A negative CV indicates the work cost more to complete than originally budgeted. Like "actuals are actuals"; "cost variance" is "cost variance".	Cost Variance
VAC = BAC - EAC	Variance At Completion (VAC) indicates the estimated cost at completion will be different than originally budgeted. A positive VAC forecasts a contract underrun. A negative VAC forecasts of a contract overrun.	Forecast Overrun or Underrun

Three Common Earned Value Metrics

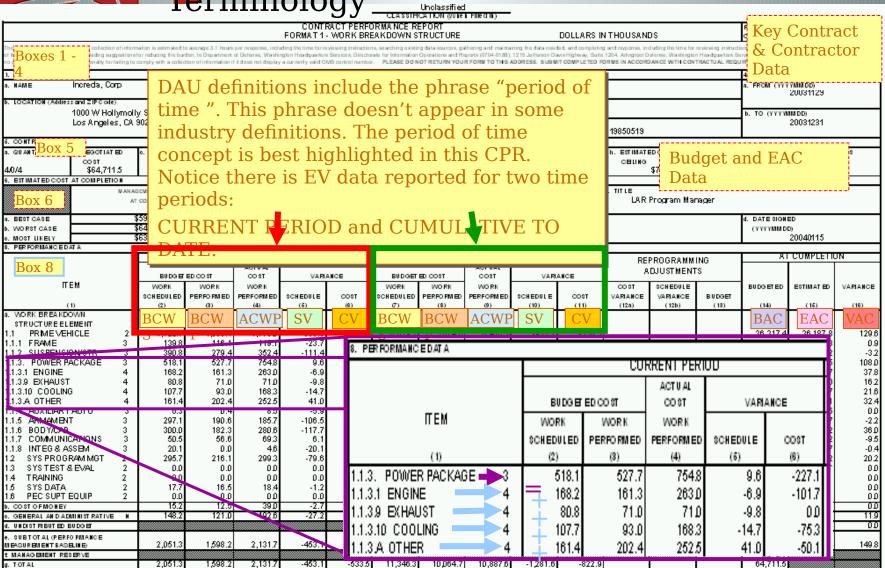
Terminology Values of the Company of **Kev Contract** FORMAT 1 - WORK BREAKDOWN STRUCTURE & Contractor nation is estimated to average 3.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and response, including the time for reviewing instructions. studing suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operation (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters Services, Directorate for Information Operation (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Defense, Washington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Headquarters (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Adington Headquarters (0704-0188), 1215 Jefferson Davis Highway, 1215 Jefferson Davis Highway PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUI PROGRAM a. HAME Increda, Corp HAME LAR DEC 2003 H AME LA R Vehoile FROM (YYYYMMDD) 20031129 LOCATION (Address and ZIP Code DAIAH01-03-C-0076 PHASE SDD 1000 W Hollymolly St b. TO (YYYYMMDD) Los Angeles, CA 90293 o. TYPE d. SHARE RATIO EVM 8 ACCEPTANCE 20031231 CPIF 50/50 30/70 CYYYYMM DD) ESTIMATED COST, OF AUT HORIZED **Budget and EAC** ILLN PRICED IND RK PRICE PRICE CHURG CBUNG \$64,711.5 \$0.00 \$7,700 / 11.9% \$72,412.2 \$75,475.7 6. ESTIMATED COST AT COMPLETION CONTINUE OR REPRESENTATIVE CONTRACT BUDGET VARIANCE rs I. Middle Ini Iai) M AN ACEMENT ESTIMATE Smith, Pop. I LAR Program Manager AT COMPLETION BASE (2) \$59,512.6 a. BESTICASE . DATE SIGNED . WORST CASE \$64,711.5 CYYYYMM DD) 364,711.5 \$1,332.8 20040115 MOST LIKELY \$63,378.7 8. PERFORMANCE DATA CURRENT PERIOD COMOLATIVE TO DATE AT COMPLETION REPROGRAMMING Box 8 ACT U AL ADJUSTMENTS BUDGET ED COST BUDGET ED COST **ITEM** WORK WORK COST BUDGETED ESTIMATED VARIANCE SCHEDULE SCHEDULED PERFORMED PERFORMED PERFORMED PERFORMED VARIANCE SCHEDULE SCHEDULED COST VARIANCE (6) (12b) (11) **EAC** ACWP BAC STRUCTURE ELEMENT PRIME VEHICLE 1,722.7 1.353.1 1.7750-369.6 -421 6,829.2 -536.3 36,317,4 129.6 1.1.1 FRAME 0.9 1.1.2 SUSPENSION/STR -32 1.1.3. POWE 108 D This Contract Performance Report (CPR) is representative of an earned value 1.1.3.1 ENGI 37.8 1.1.3.9 EXHA 16.2 report that you might receive from a contractor. The CPR will be reviewed in 1.1.3.10 COC 21.6 1.1.3 A OTHE 32.4 1.1.4 AUXILI OΩ detail in a later lesson, but for this lesson, recognize the terminology of a typical 1.1.5 ARMAN -22 1.1.6 BODY/ 36 D earned value report is consistent with the DAU definitions. The five EV variables 1.1.7 COMM -9.5 1.1.8 INTEG -0.4 (BCWS, BCWP, ACWP, BAC, EAC) are directly reported in the CPR. Additionally SYSPR 20.2 SYSTE OΩ TRAINI OΩ 1.4 the CV, SV and VAC metrics are also reported in CPR. 1.5 SYSDA OΩ PEC SU 0.0 OΩ 8.462.7 8.450.8119 0.0 OD d. UNDISTRIBUTED BUDGET e. SUBTOTAL (PERFORMANCE MIEASUREMENT BASELINE) 2.051.3 1.598.2 2,131.7 -453.° -533.5 11,346.3 10,064.7 10,887.6 -1,281.6 -822.9 63,439.2 63,289.4 149.8 T MANAGEMENT RESERVE 1.272.3 g. TOTAL 2,051.3 1,598.2 -453.1 -533.5 11,346.3 -1,281.6 -822.9 64,711.5 9. RECONCILIATION TO CONTRACT BUDGET BASE

Sample Contract Performance Report

LOCAL REPRODUCTION AUTHORIZED.

a. VARIANCE ADJUSTMENT
b. TOTAL CONTRACT VARIANCE
DD FORM 2734/1, JAN 05

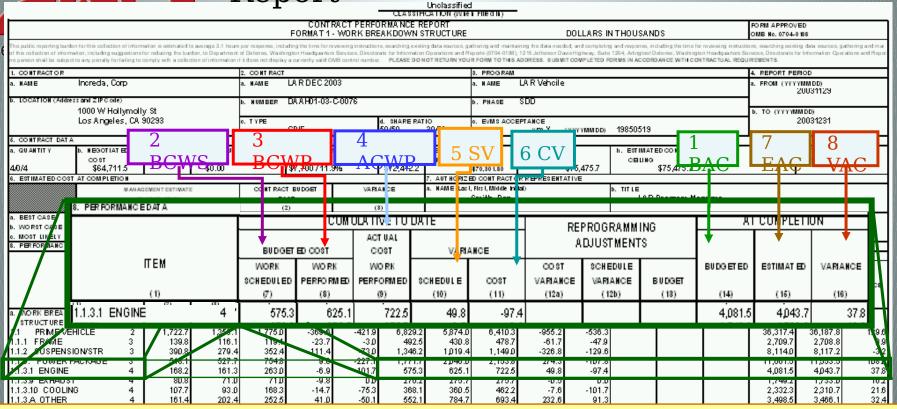
Sample Contract Performance Report Terminology ________



DAU definitions include the phrase "through any given level" which deals with WBS rollup. This phrase doesn't appear in some industry definitions. This CPR highlights rollup. Notice EV data is reported for the "Level 3" Power Package item and its subordinate "Level 4" Engine, Cooling, Exhaust, and Other items.



Interpreting the Contract Performance Report



The cumulative performance for the engine indicates the following: 1) there are 4 Million 82 thousand dollars budgeted for authorized work associated with the engine; 2) As of December 31, 2003, 575 thousand dollars worth of that work has been scheduled for completion; 3) 625 thousand dollars worth of that work was actually completed; 4) at a cost of 723 thousand dollars; 5) 50 thousand dollars more work was accomplished then was planned; 6) but it cost 97 thousand dollar more than was budgeted to accomplish this work; 7) Increada corporation forecasts it will cost 4 million 44 thousand dollars to complete all the work associated with the engine; 8) resulting in a 38 thousand dollar forecast underrun.

DD FORM 2734/1, JAN 05

Unclassified

CLASSIFICATION (Vite) Filled In

Earned Value Defense Acquisition University Basics Summary

- Earned Value Management is required by law, OMB Circular A-11 policy guidance, and DoDI 5000.2
- Earned Value provides a common denominator for Work Scope, Schedule, and Resources
- The Independent Variables of Earned Value
 - BCWS Budget Cost of Works Scheduled Baseline Plan
 - BCWP Budget Cost of Work Performed Earned Value
 - ACWP Actual Cost of Work Performed Actual Cost
 - BAC Budget at Completion Authorized Work
 - EAC Estimate at Completion Forecast Cost
- The Most Common Earned Value Metrics
 - SV Schedule Variance Accomplishment Variance
 - CV Cost Variance Cost Variance
 - VAC Variance at Completion Forecast Overrun /